

**In the Claims**

- 1           1.     [Original] A full color video projector system comprising:
- 2           a.     a light source, producing a full spectrum beam in a first direction;
- 3           b.     a splayed array of red, green, and blue dichroic reflector color
- 4 filters, said splayed array being located downstream from said light source and
- 5 being arranged so as to split said beam into red, green, and blue beam
- 6 components and re-direct them in a second direction;
- 7           c.     a lenticular lens array, said array being transverse to said beam
- 8 components traveling in said second direction, said lens array comprised of a
- 9 plurality of elongated cylindrical lenses, said cylindrical lenses being arranged in
- 10 parallel, co-planar relation, each of said lenses outputting a red, green, and blue
- 11 color stripe illumination pattern at a lens array focal plane;
- 12           d.     a relay optic downstream from said lens array focal plane in said
- 13 second direction, redirecting an incident composite of said red, green, and blue
- 14 illumination pattern in a third direction;
- 15           e.     a reflective micro-mirror light valve downstream from said relay
- 16 optic in said third direction, said light valve including three sub-pixels for every
- 17 full-color screen pixel in a full color video image, said screen pixels being
- 18 arranged in parallel stripes which correspond to the size and configuration of
- 19 said color stripe illumination pattern outputted by said lenticular lens array, each
- 20 of said sub-pixels having an actuated state in which at least a portion of said
- 21 color stripe illumination pattern is reflected in a fourth direction, and an
- 22 unactuated state in which at least a portion of said color stripe illumination
- 23 pattern is reflected in a fifth direction;
- 24           f.     a projection lens, said projection lens having an input port directed
- 25 toward said light valve, and an output port directed toward and focused upon a
- 26 projection screen; and,
- 27           g.     light valve address circuitry interconnected to each of said sub-
- 28 pixels, said address circuitry actuating appropriate sub-pixels to redirect
- 29 corresponding portions of said color stripe illumination pattern in said fourth
- 30 direction and upon said input port of said projection lens, in accordance with
- 31 corresponding video image information.

1           2.   [Original] A projector system as in claim 1 further including an  
2 optical stop between said focal plane and said relay optic in said second  
3 direction, said optical stop having an aperture sized to pass selected portions of  
4 said red, green and blue beam components.

1           3.   [Original] A projector system as in claim 2 in which said selected  
2 portions are approximately 1/3 of each said red, green, and blue beam  
3 components.

1           4.   [Original] A projector system as in claim 1, further including a  
2 condenser lens, said lens being located downstream from said light source so as  
3 to focus said beam in said first direction.

1           5.   [Original] A projector system as in claim 1, in which said light  
2 source is an arc lamp.

1           6.   [Original] A projector system as in claim 1, in which said red and  
2 green color filters are splayed apart a predetermined angle, and said green and  
3 blue color filters are splayed apart said predetermined angle.

1           7.   [Original] A projector system as in claim 1, in which said relay  
2 optic contains at least one reflective element, and is located approximately mid-  
3 way between said focal plane and said light valve.

1           8.   [Original] A projector system as in claim 1 in which said optical  
2 relay images said color stripe illumination pattern on said light valve in a 1:1  
3 ratio.

1           9.     [Original] A projector system as in claim 1 in which said light valve  
2 address circuitry includes a light valve controller connected to a column driver  
3 and a row driver, and in which said column driver is connected to one  
4 connection on each of said sub-pixels, and in which said row driver is connected  
5 to another connection on each of said sub-pixels.

1           10.   [Original] A full color video projector system comprising:

2           a.     light means for producing a full spectrum beam in a first direction;

3           b.     means downstream from said light means for splitting said beam  
4 into red, green, and blue beam components, and for re-directing them in a  
5 second direction;

6           c.     means for outputting a red, green, and blue color stripe illumination  
7 pattern at a focal plane, said outputting means being transversely positioned to  
8 said beam components traveling in said second direction;

9           e.     optical relay means downstream from said lens array focal plane in  
10 said second direction, for redirecting an incident composite of said red, green,  
11 and blue illumination pattern in a third direction;

12          f.     light valve means downstream from said relay means in said third  
13 direction, for alternatively reflecting at least a portion of said color stripe  
14 illumination pattern either in a fourth direction or in a fifth direction;

15          h.     a projection lens, said projection lens having an input port directed  
16 toward said light valve means, and an output port directed toward and focused  
17 upon a projection screen; and,

18          g.     means controlling said light valve means, for reflecting at least a  
19 portion of said color stripe illumination pattern in said fourth direction, upon said  
20 input port of said projection lens, in accordance with modulation information  
21 corresponding to a video image.

1           11.   [Previously Presented] A projector system as in claim 10 in which  
2 said optical relay means contains at least one reflective element.

1           12. [Original] A projector system as in claim 10 in which said optical  
2 relay means images said color stripe illumination pattern on said light valve  
3 means in a 1:1 ratio.

1           13. [Original] A projector system as in claim 10 in which said light  
2 valve means includes a plurality of full-color screen pixels corresponding to a full  
3 color video image, said screen pixels being arranged in parallel stripes which  
4 correspond to the size and configuration of said color stripe illumination pattern.

1           14. [Original] A projector system as in claim 13 in which each of said  
2 screen pixels includes three sub-pixels, each of said sub-pixels having an  
3 actuated state in which at least a portion of said color stripe illumination pattern  
4 is reflected in said fourth direction, and an unactuated state in which at least a  
5 portion of said color stripe illumination pattern is reflected in said fifth direction.

1           15. [Original] A projector system as in claim 10, in which said light  
2 means is an arc lamp.

1           16. [Original] A projector system as in claim 10 further including an  
2 optical stop between said focal plane and said relay optic means in said second  
3 direction, said optical stop having an aperture sized to pass selected portions of  
4 said red, green and blue beam components.

1           17. [Original] A projector system as in claim 16 in which said selected  
2 portions are approximately 1/3 of each said red, green, and blue beam  
3 components.

1           18. [Original] A reflective micro-mirror light valve, comprising: a  
2 plurality of full-color screen pixels, said screen pixels being arranged end to end  
3 to form parallel stripes, said parallel stripes corresponding to the size and  
4 configuration of a color stripe illumination pattern, each of said screen pixels  
5 including three sub-pixels, said sub-pixels including a reflective surface having an  
6 actuated state in which at least a portion of said color stripe illumination pattern  
7 is reflected in one direction, and an unactuated state in which at least a portion  
8 of said color stripe illumination pattern is reflected in another direction.

1           19. [Original] A light valve as in claim 18 further including light valve  
2 address circuitry interconnected to each of said sub-pixels, said address circuitry  
3 actuating appropriate sub-pixels in accordance with data corresponding to a  
4 video image.

1           20. [Original] A light valve as in claim 19, in which said light valve  
2 address circuitry includes a light valve controller connected to a column driver  
3 and a row driver, and in which said column driver is connected to one  
4 connection on each of said sub-pixels, and in which said row driver is connected  
5 to another connection on each of said sub-pixel.

1           21. [Currently Amended] A light valve as in claim 18 wherein the one  
2 and the another directions are the only directions in which light of the color  
3 stripe illumination pattern is reflected by the reflective micro-mirror light valve.

1           22. [Currently Amended] A light valve as in claim 18 wherein  
2 individual ones of the sub-pixels are configured to reflect only one color of the  
3 color stripe illumination pattern during ~~operation~~ all operations of the reflective  
4 micro-mirror light valve.

1           23. [Previously Presented] A light valve as in claim 18 wherein  
2 individual ones of the full-color screen pixels are configured to simultaneously  
3 reflect light of the color stripe illumination pattern having at least two different  
4 colors.

1           24. [Previously Presented] A light valve as in claim 18 wherein  
2 individual ones of the full-color screen pixels are configured to simultaneously  
3 reflect light of the color stripe illumination pattern having three different colors.

1           25. [Currently Amended] A light valve as in claim 18 wherein the color  
2 stripe illumination pattern comprises a plurality of different colors which are  
3 repetitively alternated in a common direction at a moment in time.

1           26. [Previously Presented] A light valve as in claim 25 wherein light of  
2 the alternating different colors of the color stripe illumination pattern is  
3 simultaneously present during operation of the reflective micro-mirror light valve.

1           27. [Currently Amended] A light valve as in claim 25 wherein ~~the an~~  
2 ordering of the different colors does not change during ~~operation~~ all operations  
3 of the reflective micro-mirror light valve.

1           28. [Previously Presented] A light valve as in claim 18 wherein the  
2 parallel stripes collectively have a size substantially equal to the size of the color  
3 stripe illumination pattern lying within an illumination stripe focal plane upstream  
4 of the reflective micro-mirror light valve.

1           29. [Previously Presented] A light valve as in claim 18 wherein an area  
2 defined by all of the full-color screen pixels of the reflective micro-mirror light  
3 valve is substantially equal to an area of the color stripe illumination pattern  
4 within an illumination stripe focal plane upstream of the reflective micro-mirror  
5 light valve.

1           30. [New] A light valve as in claim 18 wherein the parallel stripes of  
2 the full-color screen pixels correspond to the color stripe illumination pattern  
3 upstream from the reflective micro-mirror light valve.

1           31. [New] A light valve as in claim 18 wherein a plurality of the sub-  
2 pixels individually reflect light of the same color during all operations of the  
3 reflective micro-mirror light valve wherein light is reflected to create an image.

1           32. [New] A light valve as in claim 18 wherein the color stripe  
2 illumination pattern is generated prior to being reflected by the sub-pixels.

1           33. [New] A light valve as in claim 18 wherein the colors reflected at  
2 a given moment in time are different for all immediately adjacent ones of the  
3 sub-pixels located in a common direction.

1           34. [New] A light valve as in claim 18 wherein the full-color screen  
2 pixels individually comprise a substantially square shape and respective ones of  
3 the sub-pixels of an individual full-color screen pixel comprise substantially  
4 rectangular shapes collectively corresponding to the substantially square shape  
5 of the respective individual full-color screen pixel.

1           35. [New] A light valve as in claim 28 wherein the color stripe  
2 illumination pattern is generated prior to being reflected by the sub-pixels.

1           36. [New] A light valve as in claim 29 wherein the color stripe  
2 illumination pattern is generated prior to being reflected by the sub-pixels.